

amendments related to "capable of forming a hardened homogeneous unit with said colorant composition in the one- or multi-colored pattern, said elastomer polymer" can be found at least at page 4, lines 8-15 and page 13, lines 1-4. Favorable reconsideration is respectfully requested in light of the above amendments and the following comments.

The Examiner rejected claims 22, 23, 26, and 68 under 35 U.S.C. § 112, second paragraph. Favorable reconsideration is respectfully requested.

The Examiner rejected claims 15, 18, and 24-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,916,399 (Olsen). Favorable reconsideration is respectfully requested.

The Examiner rejected claims 15, 18, 19, 24-26 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,916,399 (Olsen). Favorable reconsideration is respectfully requested.

35 U.S.C. § 112 Rejection

The Examiner rejected claims 22, 23, 26, and 68 under 35 U.S.C. § 112, second paragraph. Applicant respectfully traverses this rejection.

The Examiner asserts that the term "fine" in claims 22 and 23 renders the claims ambiguous because the term is neither defined in the specification nor does it have a well defined meaning in the art. Although the Applicant does not concede the correctness of this rejection, the term "fine" has been deleted from claims 22 and 23.

The Examiner asserts that claim 26 is dependent on claim 1, which has been cancelled. Claim 26 has been amended to change the dependency thereof to claim 15.

The Examiner asserts that "elastomer" is spelled incorrectly in claim 68. Claim 68 has been amended to correct the typographical error.

Applicant respectfully requests withdrawal of this rejection.

Prior Art Based Rejections

The Examiner rejected claims 15, 18, and 24-26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,916,399 (Olsen). Although this rejection has not been raised with respect to the newly amended claims, it will be addressed to the extent that it may be applied. Applicant respectfully traverses this rejection.

The Examiner asserts that Olsen discloses a method of making a transfer that includes providing a base sheet, printing at least one color layer over the base sheet, screen printing a transparent polyurethane elastomer extender layer over the at least one color layer, and sprinkling hot-melt powder over the polyurethane extender layer while it is still wet. The Examiner further asserts that the claimed printing apparatus in claim 25 is not given patentable weight because these claims are directed to process.

Applicant asserts that the limitation that the image is printed by a digitally controlled color printer is neither disclosed nor suggested by Olsen. Applicant further asserts that such a limitation does carry patentable weight because the process step of printing with a digitally controlled printer is different than the process step of printing with another method.

Olsen is concerned with transfers for providing retroreflective images that include microspheres. The process of Olsen begins by printing a first imagewise pattern of a colorant composition comprising a transparent colorant in a transparent resin onto a monolayer of transparent microspheres. Then, the process prints a second imagewise pattern, which is a reflective layer composition comprising reflective flakes in a transparent binder on top of the color layer. On top of both of those layers is applied a bonding composition to form a bonding layer.

Olsen does disclose, in column 3, lines 54-60 "printing" in a generic sense. A number of well-known printing techniques, including coating, spraying, printing, lithographing, screen printing, hand painting, and other suitable application process are also listed. Olsen does not disclose, or even suggest the use of a digitally controlled color printer. Furthermore, although the inclusion of "printing" in the laundry list of Olsen could at first glance encompass digitally controlled printing, upon further inspection, Olsen provides no enabling disclosure whatsoever with regard to any technique other than silk screen printing.

Specifically, in column 3, line 61 it is stated that "the color layer 22 is typically formed by screen printing"; and in column 4, lines 13-20 the following is stated: "If desired, the color layer 22 can be formed by successively printing (typically screen printing in an imagewise pattern) and drying a plurality of colorant compositions onto the microspheres in the first graphic segment 20. In other words, the color layer 22 can comprise a number of different colors for each color of a multi-colored design or can comprise a number of differently colored layers to produce

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an additive or "hybrid" color, each layer being formed by a separately printed and dried colorant composition." (emphasis added).

From the above excerpts, it is clear that Olsen is concerned with only screen printing techniques that require a multi-step process for printing a multi-colored image. This is probably the only enabled process in Olsen because the inks utilized are not amenable to other printing methods. Digital printing and screen-printing are two very different technologies that utilize very different types of "colorants".

Screen-printing involves applying colors (in the form of an ink) through a fine mesh onto a substrate by a mechanical means. Conversely, digital printing involves placing the colors by computer controlled electronic signals in a non-impact method. Digital printing is also able to print multi-colored images in one operation, whereas screen-printing can only print one color at a time. Digital printing saves a number of operations equivalent to the number of colors printed, and it will also provide an image quality of up to 1200 dpi, compared to the maximum 150 dpi that can be achieved by screen-printing.

Digital printing can be generally broken into two categories: laser printers (discussed in the specification beginning at page 1, last line) and ink jet printers (see page 8, line 8, and page 10, line 25). Laser printers include dry electrostatic color toner printers, which are discussed at least at page 8, lines 7-8, and page 10, lines 24-25, and thermotransfer color printers, which are discussed at page 8, lines 9, and page 10, line 26. Laser printers use either powder toners or color ribbons. Both powder toners or color ribbons include thermoplastic colored dry powders with a particle size of about 5 micron. Each particle carries an electrical charge corresponding to its color. Note that a fine powder cannot be used in a screen-printing process because screen-printing can only apply liquid media.

Ink jet printers use special liquid inks. The most common technology is "drop on demand" (DOD). This works by squirting small droplets of ink onto a substrate, through tiny nozzles. The amount of ink propelled onto the substrate is determined by the driver software that dictates which and when nozzles shoot droplets. This technology is very different compared to screen-printing. Inkjet inks are water based and must have extremely special qualities, such as drying onto the substrate within 1/10 of a second. If inks don't have these short drying times the droplets will flow into each other and create "bleeding". These inks must also have unique flow properties in order to form droplet 5000 times a second.

The screen-printing inks mentioned by Olsen do not provide any of the above mentioned qualities, and therefore they cannot be used in a digital printing process. Because Olsen does not teach the use of digitally controlled printing, and does not utilize ink compositions that could be used for digital printing processes, Applicant asserts that Olsen does not anticipate Applicant's invention, and withdrawal of this rejection is respectfully requested in view of the above.

The Examiner rejected claims 15, 18, 19, 24-26 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,916,399 (Olsen). Although this rejection has not been raised with respect to the newly amended claims, it will be addressed to the extent that it may be applied.

In order to establish *prima facie* obviousness, three basic criteria must be met, namely: (1) there must be some suggestion or motivation to combine the references or modify the reference teaching; (2) there must be a reasonable expectation of success; and (3) the reference or references when combined must teach or suggest each claim limitation. Applicants submit that the Office Action failed to state a *prima facie* case of obviousness, and therefore the burden has not properly shifted to Applicants to present evidence of nonobviousness.

Applicant again asserts as above, that Olsen neither discloses the use of a digitally controlled printer, nor suggests the use of a digitally controlled printer. Therefore, the reference does not teach or suggest each claim limitation.

Applicant also asserts that there is no suggestion or motivation to modify the teachings of Olsen to obtain the claimed invention. As discussed above, although Olsen discloses "printing" in a generic sense, only screen printing is discussed and enabled. Furthermore, Olsen is concerned with providing a hardened two-component colorant composition capable of adhering well to the microspheres. In column 4, lines 30-31 it is stated that "the colorant composition of the color layer 22 typically comprises a "two-component" transparent resin", and in lines 56-58 it is stated that "it has been discovered that polyurethane-based colorant compositions work well because they adhere well to the rear surfaces of the microspheres ..". Because Olsen only discusses silk screen printing, and uses ink compositions that can only be used with silk screen printing, one of skill in the art would not have been motivated to use a digitally controlled printer.

The Applicant also asserts that one of skill in the art would not have had a reasonable expectation of success because the screen-printing inks used and disclosed by Olsen would not

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be able to be used in a digitally controlled color printer. Also, the use of a digitally controlled color printer may not give the same hardened two-component colorant composition which is necessary because it is capable of adhering well to the microspheres

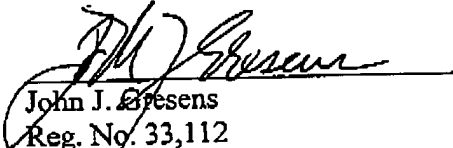
Conclusion

In view of the amendments and comments presented herein, favorable reconsideration in the form of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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